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=> s raltitrexed

L2 1 RALTITREXED

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=> d 17 1-6 ibib abs

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ACCESSION NUMBER: 2007601995 EMBASE

TITLE: Multidrug resistance associated proteins as determining factors of pharmacokinetics and pharmacodynamics of drugs.

AUTHOR: Yu, Xue-Qing (correspondence)

CORPORATE SOURCE: Department of Nephrology, Sun Yat-sen University, Guangzhou 510080, China. yuxq@mail.sysu.edu.cn

AUTHOR: Xue, Charlie Changli

CORPORATE SOURCE: The RMIT Chinese Medicine Research Group, Division of

Chinese Medicine, RMIT University, Melbourne, VIC,

Australia.

AUTHOR: Wang, Guangji

CORPORATE SOURCE: Key Lab, of Drug Metabolism and Pharmacokinetics, China Pharmaceutical University, 1 Shennong Road, Nanjing 210038,

AUTHOR: Zhou, Shu-Feng

CORPORATE SOURCE: Division of Pharmacy, School of Life Sciences, Queensland

University of Technology, 2 George Street, Brisbane, OLD 4001, Australia, s4.zhou@gut.edu.au SOURCE: Current Drug Metabolism, (Dec 2007) Vol. 8, No. 8, pp.

787-802.

Refs: 262

ISSN: 1389-2002 CODEN: CDMUBU COUNTRY: Netherlands

DOCUMENT TYPE: Journal; General Review; (Review)

FILE SEGMENT: Human Genetics 022

029 Clinical and Experimental Biochemistry

030 Clinical and Experimental Pharmacology

037 Drug Literature Index 038 Adverse Reactions Titles

052 Toxicology

LANGUAGE:

SUMMARY LANGUAGE: English

English ENTRY DATE: Entered STN: 10 Jan 2008

Last Updated on STN: 10 Jan 2008

The multidrug resistance associated proteins (MRP1, MRP2, MRP3, MRP4, MRP5, MRP6, MRP7, MRP8 and MRP9) belong to the ATP-binding cassette superfamily (ABCC family) of transporters. They are expressed differentially in the liver, kidney, intestine, brain and other tissues. These transporters are localized to the apical and/or basolateral membrane of the hepatocytes, enterocytes, renal proximal tubule cells and endothelial cells of the blood-brain barrier. Several MRPs (mainly MRP1-3) are associated with tumor resistance which is often caused by an increased efflux and decreased intracellular accumulation of natural product anticancer drugs and other anticancer agents. MRPs transport a structurally diverse array of important endogenous substances and xenobiotics and their metabolites (in particular conjugates) with different substrate specificity and transport kinetics. Most MRPs are subject to induction and inhibition by a variety of compounds. Several nuclear receptors, including pregnane X receptor (PXR), liver X receptor (LXR), and farnesoid receptor (FXR) participate in the regulation of MRPs. MRPs play an important role in the absorption, distribution and elimination of various drugs in the body and thus may affect their efficacy and toxicity and cause drug-drug interactions. MRPs located in the blood-brain barrier can restrict the penetration of compounds into the central nervous system. Mutation of MRP2 causes Dubin-Johnson syndrome, while mutations in MRP6 are responsible for pseudoxanthoma elasticum. More recently, mutations in mouse Mrkp6/Abcc6 gene is associated with dystrophic cardiac calcification (DCC), a disease characterized by hydroxyapatite deposition in necrotic myocytes. A single nucleotide polymorphism, 538G>A in the MRP8/ABCC11 gene, is responsible for determination of earwax type. A better understanding of the function and regulating mechanism of MRPs can help minimize and avoid drug toxicity, unfavourable drug-drug interactions, and to overcome drug resistance. .COPYRGT. 2007 Bentham Science Publishers Ltd.

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ACCESSION NUMBER: 2006507619 EMBASE

TITLE: Gamma-glutamyl hydrolase and drug resistance.

AUTHOR: Schneider, Erasmus (correspondence); Ryan, Thomas J. CORPORATE SOURCE: Wadsworth Center, New York State Department of Health, Department of Biomedical Sciences, University at Albany,

Empire State Plaza, Albany, NY 12201, United States.

schneid@wadsworth.org

SOURCE: Clinica Chimica Acta, (Dec 2006) Vol. 374, No. 1-2, pp.

25-32.

Refs: 85

ISSN: 0009-8981 CODEN: CCATAR

PUBLISHER IDENT .: S 0009-8981(06)00375-5 Netherlands

DOCUMENT TYPE: Journal: General Review: (Review)

FILE SEGMENT: 022 Human Genetics

030 Clinical and Experimental Pharmacology

037 Drug Literature Index

LANGUAGE: English

SUMMARY LANGUAGE: English

ENTRY DATE: Entered SIN: 9 Nov 2006

Last Updated on STN: 9 Nov 2006

AB Gamma-glutamyl hydrolase (GGH) is a lysosomal enzyme involved in the metabolism of folates and anti-folates. It acts as an endo- and/or exo-peptidase to cleave gamma-polyglutamate chains that are attached to folates and anti-folates after they enter a mammalian cell. Whereas the addition of multiple glutamates is necessary to enable the cell to retain folates and anti-folates, hydrolysis of the polyglutamate tails by GGH has the opposite effect of making (anti)-folates exportable again. Thus, GGH plays an important role in the cellular homeostasis of folate. Furthermore, high levels of GGH have been associated with cellular resistance to anti-folates, in particular methotrexate. Consequently, GGH also has pharmacological importance. In addition to the intracellular GGH, carboxypeptidase II (also called intestinal folate conjugase, prostate specific membrane antigen or N-acetyl-a-linked acidic dipeptidase) is another enzyme with Y-glutamyl hydrolase activity; it resides, however, in the cellular membrane. Although genetically and biochemically distinct, this enzyme too appears to play a

major role in folate homeostasis, by cleaving polyglutamates from extracellular folate-polyglutamates, so that they can be imported into the cell. Finally, there have been reports suggesting that Y-glutamyl hydrolase plays a role as a tumor marker in breast and lung cancer.

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ACCESSION NUMBER: 2004033045 EMBASE

TITLE: [Renal, hepatic, biliary, and cardiovascular emergencies in onco-haematology].

Urgences renales, hepato-biliaires et cardiaques en

oncohematologie. AUTHOR:

Nitenberg, Gerard (correspondence); Blot, Francois;

Raynard, Bruno

CORPORATE SOURCE: Serv. de Reanimation Medico-Chir., Institut Gustave Roussy,

94805 Villejuif Cedex, France. nitenber@igr.fr

SOURCE: Revue du Praticien, (15 Dec 2003) Vol. 53, No. 19, pp.

2160-2170.

Refs: 28

ISSN: 0035-2640 CODEN: REPRA3

COUNTRY: France

DOCUMENT TYPE: Journal; General Review; (Review)

FILE SEGMENT: 016 Cancer

037 Drug Literature Index

038 Adverse Reactions Titles

LANGUAGE: French

SUMMARY LANGUAGE: English; French

ENTRY DATE: Entered STN: 12 Feb 2004

Last Updated on STN: 12 Feb 2004

AB Whether they are the first sign of cancer or aggravate the evolution of a neoplasm already known and treated, renal, hepatic and cardiac failure constitute a vital threat for a patient with cancer and often justifies an admission to intensive care. If the clinical picture can be considered similar in all respects to that of other patients, the neoplasia and its treatments are often responsible for etiological, diagnostic, prognostic and therapeutic particularities that merit being known. So it is in nephrology with the glomerulopathies and thrombotic microangiopathy, in hepatology with veno-occlusive disease and graft versus host rejection, in cardiology with aplastic septic shock, anthracycline myocardial toxicity, cardiac tamponade... the list is far from being exhaustive. We have attempted to clarify certain of these specifities and the diagnostic and therapeutic approach adapted to these situations that are too often the source of errors with serious consequences.

ANSWER 4 OF 6 MEDLINE on STN DUPLICATE 1

ACCESSION NUMBER: 1997175090 MEDLINE DOCUMENT NUMBER: PubMed ID: 9022750

TITLE: Prodrugs of thymidylate synthase inhibitors: potential for antibody directed enzyme prodrug therapy (ADEPT).

Springer C J; Bavetsias V; Jackman A L; Boyle F T; Marshall AUTHOR:

D: Pedlev R B: Bisset G M CORPORATE SOURCE:

CRC Centre for Cancer Therapeutics, Institute of Cancer Research, Sutton, Surrey, UK.

Anti-cancer drug design, (1996 Dec) Vol. 11, No. 8, pp. SOURCE:

625-36. Journal code: 8603523, ISSN: 0266-9536, L-ISSN: 0266-9536.

ENGLAND: United Kingdom PUB. COUNTRY:

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English

FILE SEGMENT: Priority Journals

ENTRY MONTH: 199702

ENTRY DATE: Entered STN: 6 Mar 1997 Last Updated on STN: 3 Mar 2000

Entered Medline: 27 Feb 1997

AB Prodrugs of quinazoline antifolate thymidylate synthase (TS) inhibitors have been designed and synthesized for use in antibody-directed enzyme prodrug therapy (ADEPT). The syntheses of the alpha-linked dipeptides of two potent thymidylate synthase inhibitors, ZD1694 [N-[5-[N-(3,4-dihydro-2-methyl-4-oxoguinazolin-6ylmethyl)-N-methylamino]-2-thenoyl]-L-glutamic acid] and ICI198583 N-[4-[N-[(2-methyl-3,4-dihydro-4-oxo-6-quinazolinyl)]]methvl]-N-prop-2-vnvlamino|benzovl]-L-glutamic acid are described. The alpha-carboxyl of the glutamic acid has been linked through an amide bond to an L-alanine or an L-glutamic acid. The alpha-linked L-dipeptide prodrugs were designed to be activated to their corresponding thymidylate synthase inhibitors at a tumour site by prior administration of a monoclonal antibody conjugated to the enzyme carboxypeptidase A (CPA). The viability of a colorectal cell line was monitored with the potential prodrugs in the presence or absence of CPA or with the parent drugs alone. All the dipeptides had greatly decreased cytotoxicity, with a deactivation of approximately 100-fold for the ZD1694 prodrugs and approximately 20-200-fold for the ICI198583 prodrugs. Activation of the alpha-linked L-alanine dipeptides with CPA led to a cytotoxicity enhancement of approximately 10-100 fold.

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ACCESSION NUMBER: 1994064029 EMBASE

TITLE: Enzymatic synthesis of folate and antifolate polyglutamates

with Escherichia coli folylpolyglutamate synthetase.

Hanlon, M.H. (correspondence); Ferone, R.; Weaver, K.; Ray, AUTHOR:

CORPORATE SOURCE: Wellcome Res. Labs., Dept. Molec. Genet. and Microbiol., Res Triangle Pk, NC 27709, United States.

Hanlon, M.H. (correspondence) AUTHOR:

CORPORATE SOURCE: Molecular Genetics/Microbiol. Dept., Wellcome Research

Laboratories, Research Triangle Park, NC 27709, United

SOURCE:

Analytical Biochemistry, (1994) Vol. 216, No. 2, pp.

345-351.

ISSN: 0003-2697 CODEN: ANBCA2

COUNTRY: United States DOCUMENT TYPE: Journal; Article

FILE SEGMENT: 037

Drug Literature Index

004 Microbiology: Bacteriology, Mycology, Parasitology

and Virology

LANGUAGE: English SUMMARY LANGUAGE: English

ENTRY DATE: Entered STN: 6 Apr 1994

Last Updated on STN: 6 Apr 1994

Escherichia coli folvlpolyglutamate synthetase was used to synthesize micromole quantities of polyglutamyl conjugates of folic acid, methotrexate, and other analogs of folic acid. The products of the enzymatic reactions were purified by semipreparative C18 HPLC. The position of each amide linkage (γ or α carboxyl) in the

polyglutamated products was determined by limited and exhaustive hydrolyses with hog kidney folylpolyglutamate hydrolase and with yeast carboxypeptidase Y. Under standard reaction conditions, the E.

coli enzyme added up to five glutamyl residues to each monoglutamated substrate, primarily at the y carboxyl position. Thus, an enzyme which naturally adds only two glutamates to naturally occurring folates can be used synthetically to make higher polyglutamates of a wide range of

synthetic substrates. The products of the reactions are valuable tools for the study of the metabolism of antifolate drugs as well as metabolic reactions involving folate cofactors.

ANSWER 6 OF 6 MEDLINE on STN DUPLICATE 2

ACCESSION NUMBER: 1992194266 MEDLINE DOCUMENT NUMBER: PubMed ID: 1372358

TITLE: Syntheses and thymidylate synthase inhibitory activity of

the poly-gamma-glutamyl conjugates of

N-[5-[N-(3,4-dihydro-2-methyl-4-oxoquinazolin-6-ylmethyl)-Nmethylamino]-2-thenoyl]-L-glutamic acid (ICI D1694) and

other quinazoline antifolates. AUTHOR:

Bisset G M; Pawelczak K; Jackman A L; Calvert A H; Hughes L

CORPORATE SOURCE: Institute of Cancer Research, Cancer Research Campaign Laboratories, Sutton, Surrey, England.

Journal of medicinal chemistry, (1992 Mar 6) Vol. 35, No. SOURCE:

5, pp. 859-66.

Journal code: 9716531. ISSN: 0022-2623. L-ISSN: 0022-2623.

PUB. COUNTRY: United States

DOCUMENT TYPE: Journal: Article: (JOURNAL ARTICLE) (RESEARCH SUPPORT, NON-U.S. GOV'T)

LANGUAGE: English FILE SEGMENT: Priority Journals ENTRY MONTH: 199204

ENTRY DATE: Entered STN: 9 May 1992

Last Updated on STN: 6 Feb 1998 Entered Medline: 17 Apr 1992

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AB
    Thirteen poly-gamma-glutamates derived from several novel antifolates have
     been synthesized by a convergent route. The syntheses of
     poly-gamma-glutamyl conjugates of N-[5-[N-(3,4-dihydro-2-
     methyl-4-oxoquinazolin-6-vlmethyl)-N-methylaminol-2-theno vll-L-glutamic
     acid (8) (ICI D1694), 2-desamino-N10-propargyl-5,8-dideazafolic acid (6),
     2-desamino-2-methyl-N10-propargyl-5,8-dideazafolic acid (7),
     2-desamino-2-methyl-N10-propargyl-2'-fluoro-5,8-dideazafolic acid (9), and
     2-desamino-2-methyl-4-chloro-N10-propargyl-2'-fluoro-3,5,8-trideazafo lic
     acid (11) are described. A key step in the route involves coupling of an
     alpha-tert-butyl-protected poly-gamma-glutamate of the required chain
     length to the appropriate 5,8-dideazapteroic acid, obtained by
     carboxypeptidase G2 cleavage of the parent monoglutamate, if
     available, or by chemical synthesis. Deprotection with trifluoroacetic
     acid in the final step gave the desired poly-gamma-glutamyl antifolates as
     their trifluoroacetate salts. As inhibitors of thymidylate synthase,
     these polyglutamates were more potent in every case than the corresponding
     non-polyglutamylated drug.
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             0 S L1 AND L2
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         1319 L4 AND METHOTREXATE
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              0 S L1 AND L2
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           2728 S RALTITREXED
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          1319 S L4 AND METHOTREXATE
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